Please amend the claims as follows:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of claims:

1-28 (Canceled)

29. (Original) A method to determine configuration information associated with an optical network having a plurality of optical nodes coupled by optical fiber spans, the method comprising:

exchanging identification messages between neighboring nodes, each identification message including a source node identifier and node configuration data;

for each node, publishing the identity of the node, the identity of its neighbors, and the node configuration data associated with the node; and

determining a network configuration consistent with the published node information.

30. (Original) The method of claim 29, further comprising:

generating an alarm signal indicative of a configuration error responsive to detecting an error in the network configuration.

31. (Original) The method of claim 30, wherein the node configuration data includes the node protection type and the alarm signal is an incompatible node protection type alarm signal generated responsive to determining that a node is of an incompatible node protection type.

32. (Original) The method of claim 30, wherein the node configuration data includes a

node setting and the alarm signal is an incompatible node setting alarm signal generated responsive to determining that a node has an incompatible node setting.

33. (Original) The method of claim 30, wherein the node configuration data includes a node parameter associated with the network configuration and the alarm signal is an incompatible node parameter alarm signal generated responsive to determining that at least one node has an incompatible node parameter.

34. (Original) The method of claim 30, wherein the nodes publish information sufficient to determine the span interfaces by which they are coupled to neighboring nodes and the alarm signal is an incorrect fiber connection alarm signal generated responsive to determining that at least one node has incorrectly connected fibers.

35. (Previously presented) The method of claim 29, further comprising:

responsive to determining that the network configuration differs from a planned configuration, issuing an error correction command to alter at least one aspect of the optical network to form a compatible network configuration.

36. (Original) An optical node for a optical network, comprising:

an optical transport complex for adding, dropping, and passing through optical channels;

an administrative complex for administering the optical transport complex and having a memory adapted to receive provisioning data for the optical transport complex;

an inter-node communication module coupled to the administrative complex for communicating with neighboring nodes on an inter-node data channel and publishing data to the optical network; and

a configuration discovery module exchanging node identification and configuration data with other nodes to determine the network configuration.

37. (Original) The optical node of claim 36, wherein the configuration discovery module further comprises:

a neighbor discovery and publication module to exchange node identification messages with neighboring nodes and publish neighbor information to the optical network;

a configuration analysis module forming an information model of the optical network consistent with the node relationships of the neighbor information; and

an alarm generator comparing the information model with the provisioning data and generating a configuration alarm responsive to detecting an error in the network configuration.

38. (Original) The optical node of claim 37, wherein the configuration discovery module includes node configuration data comprising a node identifier and at least one network attribute associated with the node.

39. (Original) The optical node of claim 36, wherein the configuration discovery module issues an alarm signal responsive to detecting a configuration error.

40 – 54 (Canceled)